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ORIGINAL DEPARTMENT.

LECTURE.

II. PULMONARY PHTHISIS.

Delivered at the Philadelphia Hospital, November 26th, 1879,

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REPORTED BY WM. H. MORRISON, M.D.

GENTLEMEN—It may seem somewhat singular, in a clinical lecture, to occupy almost the entire hour in a discussion of anatomical points, yet it is very necessary that we should understand perfectly the morbid anatomy of these different forms of phthisis, that we may know what we are talking about.

I showed you, last week, on the blackboard, the various forms of chronic pulmonary disease that will engage our attention in these lectures. You will remember that they were chronic croupous pneumonia, chronic catarrhal pneumonia, and the different forms of phthisis—croupous, catarrhal, fibroid and tubercular.

First, then, as to this term, tubercle: In considering the pathology of this subject, it is not desirable, I think, to go over the whole ground for the last fifty years, but I shall simply try to give you an idea of what we now know. Tuberculosis is the general constitutional condition in which tubercles are formed. Tubercle is an unfortunate term to apply to this product, because we have many other applications of the term. We have tubercle in cancer, in syphilis, in simple inflammation and in chronic inflammation; still, long usage has sanctioned its application to a special sort of growth. As I have said, it is a

growth that occurs in tuberculosis. It is small, round or oval in shape, and is, at first, of a grayish color and somewhat translucent. Anatomically, it is made up of a central mass of granular protoplasm, without any definite shape, and imbedded in this a large number of nucleated cells, looking like lymphoid corpuscles. To this aggregation of granular protoplasm with imbedded cells the term giant cell is sometimes applied, but it is really not a distinct unit. We find in this mass, that the formation of a separate cell structure is not long kept up, but we have a fusion into a granular mass with the nuclei alone remaining. We may have ten or fifteen nuclei imbedded and the mass may vary much in size. As we pass outward, we find a delicate fibrillar network, and in its meshes we find lymphoid cells of a higher grade of vitality, containing one nucleus and one nucleolus. All of this makes a tubercle. Tubercle may occur in almost every tissue of the body except the horny.

This is a special form of tubercle occurring in a certain variety of inflammation. You will find similar growths in conditions acknowledged by every one to be inflammatory, and we should, therefore, recognize these tubercles as an inflammatory product; the points in which it is different are, its mode of origin and its course. It arises always in a process of infection, either of an organ or of the entire system; just as we have in certain septic diseases, as pyemia, so-called, an acute process of infection of the whole body; and in the course of this infection there arises in a number of places an acute inflammatory process; so when the system becomes the subject of a slow infection, we find arising in different tissues an outgrowth of these gray tubercles. You can

easily prove this by taking an animal, as the guinea-pig or rabbit, and putting under the skin an irritant substance, as a piece of charcoal or a string, or a piece of decomposing animal matter, and, in consequence of the irritation and slow infection of the system, you will find that the animal becomes the subject of a general tuberculosis, with outgrowths of these little gray tubercles in different parts of the body. We find the same thing in man; but it is harder to start the process in him than in animals. It seems to require some tendency on the part of the system; but of this I shall have occasion to speak under the head of the constitutional tendency to tuberculosis. But I hold that when the process is excited, the resulting product is essentially the product of a distributed infection, and that tubercles are to be regarded as inflammatory products. Tuberculosis is, then, a state of constitutional inflammation, an acute zymotic disease, in which there is a tendency to the production of miliary tubercles in one or more parts of the body, and the miliary tubercle is the product of a chronic infectious inflammation. I do not pretend to say that this inflammation is identical with that met with in the healing of wounds, or in a typical pneumonia, but that it is a grade of inflammation, and so closely allied to ordinary inflammation that we are justified in applying the term inflammation to it.

Now, having cleared the way as to the meaning of tuberculosis and miliary tubercle, as seen in the lung, we come to consider the affections included under the head of pulmonary consumption, sometimes called pulmonary tuberculosis; but this latter term is improper, because in many cases of phthisis we have no tubercle developed.

You are familiar with the division of pneumonia into croupous and catarrhal. Croupous pneumonia is, as I have already told you, a process in which the alveoli of the lung are filled with an exudation from the blood vessels which pass in the walls of the alveoli and between the lobules, containing a large number of red globules, some white corpuscles and a considerable amount of coagulable, fibrinogenous matter; but in this process the epithelium is very slightly involved, so that, as the disease goes on, and the exuded matter becomes softened, it is expectorated or absorbed, and leaves the epithelial lining in a healthy state, and thus we witness the extraordinary process in which a lung that is solid to-day is, within a week, restored to almost absolute health, with the whole of the exudation expectorated or absorbed. It would be impos-

sible for this to occur if the epithelial lining did not retain its integrity.

If we take catarrhal pneumonia, we find that the exudation which fills the vesicles is not chiefly derived from the blood vessels, but from the epithelial cells lining the vesicle, so that we have the alveoli filled with a catarrhal product formed principally of degenerated epithelial cells. The morbid process is seated principally in the epithelial cells, and thus their essential integrity is impaired, and thus, in this as in similar cases, we have a rapid multiplication of cells. We will find that such products are difficult to get rid of, and that it is difficult to restore the spot to its healthy state, because the epithelial cells, by which this must be done, are themselves the seat of disease. There are other differences between croupous and catarrhal pneumonia, but these are the essential ones.

I will glance, in passing, at a few of the other distinctions. In the croupous form we have a lobar pneumonia, which usually occurs acutely, with marked symptoms, chill, high fever and rusty sputa, runs its course in about nine or ten days, and in favorable cases terminates in recovery. In the catarrhal form we have a lobular pneumonia. It does not involve the lobes, but affects scattered lobules throughout the lobes, or perhaps throughout both lungs. The lobule involved may be no larger than the end of the little finger. If you examine these centres of disease you will find that they are harder than the surrounding tissue. On cutting it open you will find it filled with catarrhal matter, presenting under the microscope the conditions before described. There may be but few of these points of catarrhal inflammation. They occur most frequently at the apex of the lung. They are also quite common at the root, and may occur at any part of the lung whatever. Croupous or lobar pneumonia is most common at the base of the lung, while, as I have said, catarrhal or lobular pneumonia is most common at the apex and at the root posteriorly.

There is, of course, a great difference in the general symptoms and physical signs in these two forms. As a rule the catarrhal form is much less violent. There may be a slight chill, followed by a little fever. It runs a more insidious course. In a great many cases which are considered ordinary colds there is really a trifling catarrhal pneumonia which has been overlooked. The physical signs are also quite different, for in catarrhal pneumonia the scattered lesions give rise to but little dullness on percussion and little change in the sounds heard upon

auscultation; but the point upon which I want particularly to dwell is the radical difference in the anatomical changes and the vital tendencies of the part affected. In the one, a rapid clearing up of the lung; in the other, a disease which is apt to pass into a form running a chronic course.

Acute croupous and acute catarrhal pneumonia do not belong to our present study, but both of these are apt to become chronic; and this is true to a much greater extent of catarrhal than of croupous pneumonia. Occasionally croupous pneumonia, either from the extreme violence of the attack or from some failure of the constitution of the patient, does not go through its normal stages and terminate in resolution, but we have, instead, a chronic solidification of the lung, a chronic croupous pneumonia. The lung becomes indurated, and there is a marked tendency for the cellular tissue to become involved, so that we have fibrous bands passing through the lung in different directions, the inter-cellular tissue becomes thickened and the lung passes into a state of fibroid thickening; but it is remarkable how long such a lung will retain its vitality. This is because the cellular elements of the alveoli have not been involved. Months may elapse, and the solidification of the lung still persist, and yet no sign of breaking down of the lung substance show itself. Now, here let me call attention to what I said last week in regard to the use of the term phthisis. Just as long as the lung is simply solidified, and no breaking down of its structure has occurred, it is not a case of phthisis. There may be hectic fever; there may be wasting of the flesh; there may be extreme loss of strength; there may be shortness of breath, purulent expectoration, and severe cough; there may even be hemorrhage from the lung, but so long as there is no breaking down of the lung, it is not phthisis. Therefore, a case of croupous pneumonia may pass into the chronic form, the lung may become solidified, there may be fibroid thickening, but unless there is a breaking down and destruction of the lung substance, in consequence of the cellular lining of the vesicle losing its vitality, it is not a case of pulmonary phthisis, properly so called, for no matter how long the condition has lasted, such cases are susceptible of cure without loss of tissue.

How does the lung break down in such cases? Usually, in one of two ways. The first way in which it takes place is by the circulation of the part being cut off, thus causing its death; the necrosed mass softens, is expectorated, and a

cavity is left. The second way is by a process of cheesy degeneration. Cheesy degeneration may affect any morbid product; it is simply a process of slow drying, associated with a slow fatty metamorphosis, by which the soluble parts are absorbed, leaving the product dryer and dryer, and owing to the defective circulation of the part, the albuminous elements are, by a destructive chemical process, slowly converted into cheesy and fatty matters. When cheesy degeneration has occurred, it is usually a sign that the vitality of the part has suffered, and that its circulation has become impaired, and not only does the inflammatory product suffer, but the surrounding tissue is also likely to be affected. Therefore it is that when we have a centre of cheesy degeneration we usually find that the surrounding part has lost its vitality, and is breaking down. This may occur even when its circulation has not been impaired, because the irritating matter from this centre of cheesy degeneration is likely to set up an inflammation, which, acting upon a part already weakened, is likely to be followed by its degeneration. Thus, in two ways may we have loss of lung substance, either by an arrest of the circulation and a process of necrosis, or by a slower process of cheesy degeneration, and it is then, and not before, that we have a case of chronic phthisis. Before this the condition is capable of being absolutely cured, without loss of substance.

Although croupous pneumonia may pass into the chronic state, yet it is the catarrhal form that is more likely to do so. The reason of this is because the disease strikes at the vitality of those parts by which it is to be removed. It is upon the integrity of these epithelial cells in croupous pneumonia that the rapid recovery depends, and it is upon this implication in catarrhal pneumonia that its chronic course depends. I am sorry to say that in many cases this tendency is increased by the condition not being recognized, and by improper treatment being adopted. No one can mistake a case of croupous pneumonia, but it requires a trained ear and an extended clinical experience, in order to recognize a case of catarrhal pneumonia. Chronic catarrhal pneumonia is much more likely to prove fatal than chronic croupous pneumonia. This is due to the fact to which I have now alluded so often, that in this condition the epithelial cells are weakened and diseased. After a lung has passed into a state of chronic catarrhal pneumonia, it may remain in that condition for some time. It may remain for weeks, and if the patient have naturally a good constitution and a vigorous nutrition, for months,

and no phthisis result, although throughout all that time the patient may have had cough, hectic fever and night sweats; but if there has not been destruction of the lung tissue, it is possible that the patient, under judicious treatment, may recover, without any loss of tissue; but unfortunately, in the majority of cases the disease has continued so long before coming under observation that it has induced destruction of the epithelial lining, the catarrhal matter has passed into a state of cheesy degeneration, the cells have become implicated, and we have a catarrhal phthisis developed.

Fibroid phthisis is a frequent complication of both of these forms of phthisis; thus we may have, in croupous phthisis, the inter-lobular cellular tissue becoming the seat of a hypertrophic process; and even after the exciting cause is to a great extent removed, we find that this process of fibroid thickening remains. The same is true in catarrhal phthisis; but in some cases we find this thickening of the inter-lobular connective tissue forming so marked an element that they may be termed fibroid phthisis, *par excellence*. We usually find, in these cases, the pleura much thickened, the lungs indurated, and fibrous bands stretching in every direction. We frequently find in fibroid phthisis cavities filled with the broken-down products of croupous or catarrhal phthisis.

In all that I have yet said I have not mentioned the complication of tubercle with these processes.

I have described two forms of phthisis, croupous and catarrhal, and I told you that in both of these fibroid thickening is apt to occur, but that we also had a form where the thickening is so marked, and which, although not a separate form, preëminently deserves the name of fibroid phthisis, for we find it associated with certain peculiar physical signs and a peculiar clinical history.

Each of these forms is associated with what I consider an essential element of phthisis, that is, a destruction of the substance of the lung, so that if recovery takes place, it is with some loss of substance and by cicatrization. As long as recovery can take place without a loss of substance and cicatrization, it is not phthisis.

Every one of the forms of phthisis that I have mentioned may go through all its stages without the appearance of tuberculosis, or every one of them may be associated with tuberculosis. Tuberculosis, if you accept the definition I have given you, is a specific, infectious inflammation, resulting from the absorption of some septic material from a seat of disease. The process is, as

a rule, first set on foot around the original centre of disease. Sometimes the matters absorbed are carried throughout the system, setting up a process of general tuberculosis in many organs simultaneously. It is characterized by the production in all the affected parts of the little gray masses already described as tubercles. Therefore, at any period of phthisis the lung may absorb septic matter and become the seat of tuberculosis; but the readiness with which a lung becomes the seat of tubercle differs much in different people. Some will have a chronic catarrhal phthisis for ten years and not develop tubercles, while others cannot have a chronic catarrhal phthisis for two weeks without passing into a state of tuberculosis and dying in sixty days, twenty days, or even within five days. This peculiarity appears to depend upon some inherited constitutional tendency, but yet no living being is free from the danger. Any person who has a chronic croupous or catarrhal pneumonia, especially if it has passed into the form of phthisis, is liable to develop this inflammation which shows itself in tuberculosis.

I have here a number of specimens from cases of phthisis which will enable me to illustrate these different forms.

This first is an illustration of chronic croupous phthisis, with intense fibroid change. At the posterior part I show you an enormous cavity which appears to involve the whole posterior part of the lung. In front we have the lung in a state of fibroid thickening, with a number of small cavities scattered through it.

Here are the lungs from a case of chronic catarrhal phthisis, where you will be able to see, throughout the lower lobe, accumulations of cheesy matter, varying in size from a pin's head to a pea. In the upper lobe we find shown in a very marked degree the thickening of the fibrous tissue and the formation of cavities as large as an English walnut. In this thickened tissue you can still see the cheesy matter resulting from the catarrhal disease. In this lung there is a marked development of tubercle.

This is a case of fibroid with catarrhal phthisis. We have the upper lobes, the seat of fibroid change; in other places there are spots of catarrhal change. There was here a development of tubercle toward the close of life.

I have here the lungs taken from a patient only a few days ago. She was admitted to the University Hospital in a moribund condition, with a history of starvation and exposure, and died thirty-six hours after admission. Examining the lungs, we find at the apices masses of a

calcareous character, the result of a long standing catarrhal pneumonia. The product having passed into a cheesy state, the organic matters have been absorbed and the inorganic matters remain as a mortar-like mass. This piece is about three-fourths of an inch in diameter. This woman was attacked by croupous pneumonia, grafted on this old catarrhal process. The lung is now in a state of gray hepatization. If this woman had lived we would undoubtedly have found that the lung would have passed into a state of rapid phthisis.

These are probably enough to show you the anatomical conditions of phthisis and their mode of origin. When we again meet, I shall have to allude to the difference between acute tuberculosis and tuberculosis occurring in consequence of chronic disease of the lung. I shall bring before you a number of cases with their clinical histories, illustrating the evolution of each of these varieties of phthisis.

COMMUNICATIONS.

SUNSTROKE—INSOLATION—COUP DE SOLEIL.

BY HORATIO E. BIGELOW, M.D.,
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These terms are applied to different affections induced by exposure to the direct rays of the sun, or to the combination of great heat with other extraneous and causative conditions. While it is true that the percentage of cases favors direct exposure to the rays of the sun as the exciting cause, yet the physician will not infrequently, in the course of his summer practice, be called upon to treat cases in which there has been no exposure, and in which the cause of the attack is due to deficient sudoriferous action, increased by the close atmosphere of a house or room. These instances usually occur among adults of advanced years, of unstable physique.

Etiology.—Long continued exposure to the direct rays of the sun is apt to be followed by alarming nervous symptoms. The moist, intense heat—that weakens the strongest man, and which characterized the midsummer days of 1879—that hangs like a shroud over nature, and which operates as fatally in-doors as out, will reach the patient in his drawing room, and will be followed by a train of symptoms quite as severe as those which ensue from direct exposure. A predisposition to attacks of heat stroke, apart from the extraneous conditions of tight or heavy clothing, of physical fatigue, of overcrowding and bad

ventilation, is to be found in the physical state of the patient for some days prior to the attack. A deficient evaporation and radiation from the skin has been engendered by shock, mental or physical. A great grief coming unawares into the heyday of life may check all the secretions and excretions of the body. The sudden shock to the system occasioned by a cold bath when one has exercised violently and become overheated, contracts the mouths of the glandular apparatus, rendering evaporation impossible, so that the retained heat is thrown back upon nerve centres already hyperemic, and then follow the manifestations of congestion. Another cause is to be found in the practice of anointing the body with different substances, to alleviate itching or to give a more bland appearance to the skin. In this way the mouths of the glands become choked and are incapable of functioning. A deficiency of drinking water is a cause of this condition in some countries. Bad ventilation and overcrowding, where the excess of carbonic acid exhaled over the amount of oxygen inhaled is apparent, will render the nerve centres unstable, will interfere with the functions of the lungs, and render the persons so living peculiarly liable to the fatal effects of heat. Excessive fatigue, by imposing superlative duties upon the heart, lungs and nervous system, creating a condition of exhaustion and irritability, may induce an attack of sunstroke in a person exposed to the influence of heat. And, finally, exposure after a hearty meal may cause it.

Post-mortem Appearances.—Dr. Wm. Pepper (*Transactions of the Philadelphia College of Physicians*, vol. III, old series, p. 99 et seq.), in four post-mortem examinations of patients who died from sunstroke, detected no indication of congestion of the brain; nothing, in fact, in any of the organs of an unusual appearance, save in the heart, which was pallid, flaccid and softened. The cavities contained but little blood and no coagulum. The endocardiac membrane and that lining the blood vessels were of a very dark, almost purple, color. Other observers have found the vessels of the pia mater notably congested, simulating congestive apoplexy; generally, if not invariably, there is marked pulmonary congestion.

Dr. Horatio C. Mead (*American Journal of the Medical Sciences*, October, 1863) reports several cases in which the blood had an acid reaction. The pathological conditions differ as the deaths result from exhaustion and syncope, produced by heat and over exertion, or from apoplexy with exhaustion. Sometimes there is extreme fluidity

of the blood, with distention of the right heart. The pathological conditions observed by Dr. Pepper would indicate death from exhaustion. More recently it has been found that the nervous centres themselves undergo marked changes. The pneumogastric ganglia have been found in a condition of fatty degeneration, the first stage in the process being an intense hyperemia. And, *a priori*, we might naturally suppose that the ideomotor centres of the brain, together with the automatic centres of the cord, were implicated in a destructive process, if we study the subsequent nervous history of a patient who has suffered from sunstroke. In some instances we have continued manifestations of grave centric lesions. From pathological evidences Watson was led to believe that direct exposure to the rays of the sun operated on the brain as a concussion. Later our treatment has been based upon a differential diagnosis, the varying forms of the disease having been learned in the dead house. We must discriminate, then, between the purely congestive form, the form of exhaustion, and that in which the two are combined.

Symptoms.—Dr. Muirhead describes three varieties of the actual attack—cardiac, cerebrospinal and mixed. In the first there is sudden syncope and death; in the second coma, hurried or stertorous breathing, contracted and immovable pupils, congested conjunctivæ, a rapid, feeble and unequal pulse, with a heaving, billowy heart action. As premonitory symptoms we may have heat and dryness of the skin, the patient complaining of a burning, stinging sensation, marked hyperpyrexia, debility with exhaustion, vertigo, and less frequently intense headache, frequent micturition and delusions. In a case which fell under my notice during the extremely hot term of last summer, I noted the following condition. The patient was a lady, seventy-two years old. She had been living in a room directly under the roof, in which the temperature was excessively high, with insufficient ventilation, but she had not been exposed to the direct rays of the sun. I found her in bed, with a thin, rapid, compressible pulse, insufficient heart action, a temperature of 110°, a dry, harsh skin. She was entirely unconscious, and had well marked subcutis tendinum. Her daughter informed me that she had been obstinately constipated for some days, and had complained of a general sense of malaise. That she was unusually nervous and unable to sleep. That she had not perspired at all.

In a report based on the observation of sixty cases in the New York Hospital, Dr. Swift writes:

"The patients are suddenly seized, while in the performance of their labors, with pain in the head, and a sense of fullness and oppression in the epigastrium, occasionally nausea and vomiting, general feeling of weakness, especially of the lower extremities, vertigo, dimness of vision, and insensibility. Surrounding objects appear of uniform color. In a great majority of cases this was, so far as could be ascertained, blue or purple; in one instance everything appeared red, in another green, and in another white" (*Flint, Practice of Medicine*). In twenty-four out of the sixty cases observed by Dr. Swift there were convulsions. Dr. Flint observes that he has seen death take place purely by apnoea, the pulse having considerable force until after the cessation of breathing. The temperature may rise as high as 112°, as mentioned by Dr. Dowlee, of New Orleans, or it may remain unaffected. Vomiting is frequently a prominent symptom, and the evacuation from the bowels may be involuntary. If there be profound coma, conjoined to stertorous or sighing breathing, the prognosis is extremely unfavorable. Great frequency and feebleness of the pulse, relaxation of the sphincters, tracheal râles and complete immobility are forerunners of a fatal termination. Convulsions are extremely unfavorable (*Flint*).

Treatment.—The pathological character of the affection as manifested by the symptoms is the clue to the treatment in each case. In the adoption of such a course therapeutical measures will be opposed to each other in different instances. Many cases have terminated fatally which might have recovered had it been possible to insure *absolute* rest to the patient. The necessity of removing the sufferer to a hospital, and the length of time which may elapse before medical assistance can arrive, are causes which may operate fatally. Especially is rest a prerequisite to recovery in cases of exhaustion where death is imminent from asthenia or syncope. When summoned to attend an adult suffering from heat stroke, our first duty is to remove the clothing and insure free ventilation. If it be a well-marked apoplectic case, with full, bounding pulse, stertorous breathing, slow respiration, heat of the surface, with throbbing of the carotids and temporal arteries, we should apply the ice-cap and sponge the body; the cold douche to the shoulders and chest is of great service. The bowels should be freely moved by a brisk cathartic, preferably a drop of croton oil upon the tongue, and the head should be raised. The abuse of any procedure in the practice of medicine is not a contraindication of its use, and the

physician will use his own discretion as to the propriety of bloodletting; while the abstraction of blood would be fatal in some cases, it seems to be very important in others. In the purely apoplectic cases free wet cupping of head and spine seems to be good practice, and the history of its discriminating use confirms this view. Revulsives should be applied to the extremities. If the case should be one in which the predominant symptom is exhaustion, as represented by a weak, frequent pulse, feeble heart, and with the absence of the signs of cerebral congestion, we must avoid, absolutely, cathartics, emetics, and all depressing agencies, and cautiously administer stimulants by mouth or rectum. If the surface be hot and dry we may sponge the body with spirits and water. In the mixed form of the affection the treatment will be regulated by the predominance of symptoms. The use of cold to the head, of the douche, of cathartics or bloodletting, or of stimulants, will be governed by the intensity of either the apoplectic symptoms or those of exhaustion. Serious sequelæ are not apt to follow, but in certain instances well marked symptoms of cerebral impairment have been noticed. The father of a family which I attend has never fully recovered from the effects of a sunstroke received three years ago. For six months after the attack he was obliged to stop on the sidewalk and hold on to a tree box or lamp post if he heard the rumble of an approaching horse car or carriage. He was for a year troubled with extreme insomnia and nervousness, and he now has well developed neurasthenia. The use of pills of phosphorus and nuxvomica in these rare cases, conjoined to the daily exhibition of electricity, will be followed, generally, by improvement.

Insanity as a result of heat stroke was noticed by Dr. Smith in only two cases. Surgeon-Major A. R. Hall, B. A., of India, suggests the hypodermic injection of quinine. His formula is as follows:—

R.	Quinise sulphatis,	grs. x
	Acid. sulph. dilut.,	℥ x
	Aque,	ad ℥ c M.

To be used in three injections at short intervals, until reaction supervenes.

Dr. Thomas G. Herron, of Cincinnati (MED. AND SURG. REPORTER, October, 1868), advises hot water. This is to be poured over the neck and head, and wet towels, frequently changed, are to be applied to the head.

In the *Virginia Medical Monthly* for November, 1874, Dr. C. G. Hill, of Maryland, recommends the inhalation of oxygen.

CONSERVATIVE MIDWIFERY.

BY GEORGE HAMILTON, M.D.,
Of Philadelphia.

The *Pacific Medical and Surgical Journal*, for January, 1880, contains a paper by its senior editor, Henry Gibbons, Sr., M.D., entitled "A Protest Against Meddlesome Midwifery," which was read before the San Francisco County Medical Society, and afterward reissued in pamphlet form.

The use, or preferably, the abuse, of the forceps, is that which has engaged the attention of the author almost exclusively; and whether the views presented meet with general acceptance or not, the independent, fearless spirit and moderate tone that characterizes the paper are worthy of commendation and imitation.

In the first paragraph of the "Protest" we are informed that the late Prof. Charles D. Meigs, preëminent as a lecturer and author, and authority upon the subject of midwifery, one day entered the lecture room, placed his manuscript on the desk, and in a very deliberate and serious manner said, "Gentlemen, meddlesome midwifery is bad." Then turning over the leaves of his manuscript he repeated, "Meddlesome midwifery, I say, is bad;" and walking backward and forward several times, he returned to the desk and repeated, "I say, gentlemen! meddlesome midwifery is bad." He then declared that "he did not know that he could better occupy his allotted hour than by repeating, and iterating and reiterating, 'Meddlesome midwifery is bad.'" These cautions were only uttered after long experience; for it appears from the "Protest" that Dr. Meigs had not been averse to the employment of the forceps, and had, perhaps, done as much as any man in America to promote their use. "Such admonitions," Dr. Gibbons remarks, "are seldom heard at the present time, the tendency being in the opposite direction."

When the position of the late Dr. Meigs as lecturer and author is remembered, but, above all, when the vast field of experience he had during so long a life traversed is called to mind, is it not a matter of surprise that in so short a time after his active career, opinions and practice so antagonistic and contrary should have found place! But the opinions and practice of Dr. Meigs in reference to the proper use of the forceps were not peculiar to him. Contemporary authors and practitioners, and others, before his time, had views similar to those announced above. Some of these had an experience in hospital and private practice that falls to the lot

of few devoted to this branch of medical science, and consequently had corresponding advantages in the field of observation. The forceps, too, was no new appliance to them; on the contrary, it had, in various forms, long been in use as a resource in cases demanding their assistance. It is possible that an accoucheur in earlier times could occasionally be found who favored their frequent employment, but such practice was exceptional, and found no support in the teachings or example of the more prominent authors and practitioners of the time. A statistical comparison of the frequency of resort to the forceps at the present day with that of the time of Ramsbotham would, indeed, be marvelously curious and interesting, perhaps instructive. In the opinion of this distinguished authority the application of the forceps was absolutely necessary in only one case in about five or six hundred; while, if memory serve aright, there are now those who, professing to use them only when actually necessary, find them of great advantage in every sixth or seventh accouchement. Nor is this all; it is not many years since a rather young practitioner informed me that, at one period of time, he had used the forceps in from twelve to fifteen consecutive cases, and, as usual, always advantageously. Such a plurality of coincidences as this statement involves may beget doubts even in one who is not specially incredulous. Another practitioner, with exceptional frankness, informed me that, to save time, he applied the forceps the moment an opportunity occurred, and brought the child into the world. One of these gentlemen condemned, in unqualified terms, the use of a forceps devised by a professor of exalted reputation; yet this instrument is in extended use, and has in its favor the voices of many distinguished professors and practitioners of midwifery. Who then shall deliver the incipient accoucheur from his embarrassment on beholding that which, on the one side is regarded as the acme of perfection, on the other declared to be absolutely worthless? Who then, in this dilemma (for the authorities are not in accord), shall, or by any possibility can, resolve the difficulties the question presents? It has been urged, in justification of the frequent resort to the forceps at the present time, that woman has no longer the strong constitution she formerly possessed. This statement, although accepted by very many in and out of the profession, can find application only within narrow bounds. The returns of the Board of Health of Philadelphia, and doubtless of other cities, show unmistakably the greater longevity

of woman than of man; nor need this cause any surprise, in view of the greater proclivity of man to dissipation of nearly every kind, that of indulgence in intoxicating liquors included. But suppose the average woman, regardless of occupation or her social position, to be less vigorous than at an earlier period, it does not of necessity follow that nature is insufficient to accomplish that which must be regarded as one of the great, if not the chief, purposes of her existence. All experience shows that many of the most muscular and robust women have more tedious and painful labors than those of less vigorous constitution, as is more especially evident in a first parturition. Nor is a reason wanting for this, since the tissues of the robust woman possess greater tonicity, and, consequently, are correspondingly less yielding than in a woman of less rigid fibre. In fact, it not unfrequently happens that the real difficulty of accouchement is not so often caused by a contracted pelvis, as by a naturally contracted, tense, and unyielding condition of the soft parts involved in parturition. This obstacle to delivery is often so persistent and difficult to overcome that the head of the child is greatly elongated, the occiput sometimes assuming a wedge-like form; its integument so congested and swollen that, occasionally, in two or three days after delivery, the scalp will present an inflamed or pustular appearance. It is cases of this character, where the head is suddenly expelled by the giving way of a small or larger portion of the perineum, that prove where the real difficulty lay, and this is confirmed in the fact that the head will, as a rule, readily pass in a second accouchement, showing that the capacity of the pelvic diameters was not deficient.

The extent to which forceps delivery has lately been carried may be exemplified as follows: A woman residing in a street of moderate size, with neat two and three-storied houses from one end to the other, occupied chiefly by thriving mechanics, lately informed me that she had good reason to believe that a majority of the women residing there were delivered by instruments. Most of this practice is in the hands of young men, who should certainly acquire the "know-how," as Dr. Gibbons terms it, before they arrive at old age.

Whatever may be the advantage of forceps delivery in exceptional cases, it is undeniable that the number of children still-born, or dying a short time after delivery, when the forceps have been employed, is, beyond comparison, greater than where the accouchement has been the work of nature alone. And again, it is the opinion

of many physicians that so many deaths by convulsion, from birth until three months old, could not occur unless some strong impression were made upon the brain or spinal marrow during artificial delivery. Furthermore, the risk, in instrumental delivery, of wounding and endangering the life of mother and child should be regarded as of most serious importance. That an immense majority of lacerations extending into the bowel have been forceps cases, is beyond doubt, and it avails nothing to say that this grievous accident would have occurred independent of their use, for this idea is negatived by the experience of hundreds of practitioners of former and present times who scarcely ever have had recourse to instrumental delivery. It may be admitted that such an injury might seldom happen in the practice of one who, to a rare judgment and power of discrimination, conjoins the tactile sense and manual dexterity of a *Civiale*; but how seldom, amid the throng of those who so frequently encounter what they regard as legitimate forceps cases, do we find these qualifications? Dr. Gibbons pertinently asks: "If the forceps have done all the good claimed for them since their introduction into general use, should we not have some diminution of the uterine troubles of married women?" A satisfactory affirmative response, it is to be feared, cannot be given to this question.

If, indeed, the uterine and allied derangements known, or supposed by the gynecologist, to exist, and those known or imagined by women to have overtaken them, were enumerated, the record would doubtless suffer, in comparison with that of the time when the gynecologist was not often seen or heard of. And yet the day is rapidly approaching, if it be not now at hand, when gynecology threatens to usurp, or, at least, assume a position of significance beyond that of the wide field of general medical practice, or indeed the more prominent and demonstrative surgical branch of medicine. If the amount of space in the medical journals and works devoted entirely to this subject be examined, it will be found disproportionately large, in comparison with that allotted to general medical and surgical practice; yet the latter constitutes, probably, eight-tenths of the practice of that proportion of the profession.

If the view presented be substantially correct, may it not explain the great, the increasing disposition to engage in the practice so expressively, yet indefinitely, formulated, "Meddlesome Midwifery?" "But, why," some one asks, say "indefinite?" The answer is at hand in the fact that

one practitioner has used the forceps advantageously in twelve to fifteen consecutive cases; another in every sixth, twelfth, twentieth, or fiftieth case; until finally a legitimate forceps case occurs only once in five or six hundred, when all will agree that the odious phrase can no longer apply. But may not, as Dr. Gibbons intimates, the very skill and proficiency of the accoucheur beget a confidence that will lead him to interfere when there is no sufficient occasion, and thus take the business entirely out of the hands of nature. Now, pertinent as this suggestion is, it may well be doubted whether one of this class could be found who was willing to admit its applicability to himself; and as to the multitude who may possess neither skill in manipulation nor experience sufficient to justify the frequent instrumental deliveries in which they engage, self-justification, in case of disaster, would probably impel a large number to such protestations and asseverations as they deemed necessary for their defence. That the present disposition to interpose artificial assistance, by forceps or other rude measures, for accelerating parturition has gone to excess, is beyond doubt, and when reduced to practice by the class last alluded to, must be regarded as mischievous, or dangerous in character. And yet, how seldom is a protest by an author or the warning voice of the professor heard in opposition to the frequent and too often hasty and indiscriminate resort to such expedients. Thanks, then, are due to Dr. Gibbons for promulgating, in the *Pacific Medical and Surgical Journal*, and issuing in pamphlet form, the lectures delivered by him before the San Francisco Medical Society, upon this important subject. An experience of half a century, the advantages of having had as tutor a father who, during many years, stood preëminent as a practitioner of medicine, in Wilmington, Del., a cautious investigator, of enthusiastic yet not fanatical temperament, Dr. Gibbons may well be regarded as entitled to speak or write, as it were, ex-cathedra, upon this serious and interesting subject, and declare his conscientious convictions in no uncertain language.

But it is not only in parturition that rude artificial measures are so often resorted to. A multiplicity of uterine troubles and various affections and accidents of other parts of the generative system come in for a full share of the *nimia diligentia*, in the shape of numberless instruments and appliances, some of them, the pessary for example, so strangely and variously constructed that, as a president of the New Hampshire Medical Society once said in his address, they repre-

sented nearly everything, from a simple ring up, till they suggested the idea of a locomotive. In other cases the instruments are of such "ferocious mien" that the female of half a century ago would shrink from fright at the sight of them. Yet these instruments are in constant use upon the woman of the present day, and others are from time to time devised, and, *mirabile dictu*, the uterine and other troubles of the organs of generation increase in number and variety, *pari passu*, so that full scope is afforded for the use of instruments of any date. Fortunately, the elastic physique of woman, as Prof. N. Chapman half a century ago declared to his class, is capable of bearing more disease, suffering and drugging than the more rugged structure of man; and no experienced physician will differ from this opinion. Had the Professor lived in our time he would have had still more ground for his declaration; for if there be one portion of woman that, more than another, bears up under and recovers from rude treatment, it is the generative system. This statement, then, must serve as an answer to the following question, propounded not only within, but outside of the profession: "Has not the creative power failed in this portion of the organism of woman?" On the contrary, nature has endued the reproductive organs of the female, intended as they are for the preservation of the species, with exceptional powers of endurance and resistance; so that, as a rule and under usual favorable conditions, woman seldom fails in the accomplishment of that work to which she is specially destined. The paper, then, of Dr. Gibbons did not appear too soon; and it is to be hoped that other authors, lecturers and practitioners, may come to his support in this effort in behalf of a more conservative practice than now prevails.

HOSPITAL REPORTS.

HOSPITAL OF THE UNIVERSITY OF PENNSYLVANIA.

CLINIC OF WILLIAM GOODELL, M.D.,

Professor of Clinical Gynecology in the University of Pennsylvania.

Reported by CHARLES W. DULLER, M.D., Surgical Registrar to the University Hospital.

Uterine Polypi and Laceration of the Cervix Uteri.

GENTLEMEN—Our first patient to-day is a woman, 51 years of age, who has of late had hemorrhages from the womb that alarm her. What may be the cause of these it is at first hard to say. She may be at what is called the "dodging period," when there is often a good deal of

blood lost at irregular intervals. This woman has had severe bleedings, and her face shows how these have drained her system. Now, the first thought that passes through my mind when I meet a patient like this, is of cancer. But this I know is not such a case. Next I think of fibroids. These, in white women about 40 years of age, often keep up the menstrual molimen and demand active interference. Polypi of the womb are another source of dangerous hemorrhages. And it is a curious fact that their danger is in no ratio to their size. Dr. Charles Locock had a woman bleed to death from a polypus no larger than a pea; and I remember a case of my own, where there was a frightful hemorrhage caused by one even smaller. These growths of the womb are usually cervical; they are often found dangling from the os uteri; they are not always easy to discover by digital examination, as they slide away from the finger and sometimes slip clear back into the uterus.

Here let me say a word about speculums. The ordinary Fergusson glass speculum is of little use in these cases. It closes up the os. You had better employ a duck-billed or bivalve speculum, which opens it, so that you may often see a polypus dangling from it. This is what I find here. The os is unusually open, too; more open than should be in a woman at her time of life.

In regard to the position occupied by polypi, they are usually three: 1st, are those that lie in the vagina, with a good long pedicle, and are easy to remove by twisting or by cutting off with a wire. 2d, are those that lie partly in the os, and partly in the vagina, like the clapper of a bell. You see how this one hangs, apparently inside, and yet, if you look, you can see that it projects a little below. 3d, are those entirely within the cavity of the womb.

The ease of removing polypus depends upon their position and size. I usually use a pair of fenestrated forceps. These I hold in my hand I would not exchange for many times their weight in gold, that is, if I could not get another pair just like them. You see how I have now grasped this growth with them, and with a twisting motion I tear it loose and bring it away. And now I find others, entirely inside the womb, which I must take away. We have considerable hemorrhage, and I mean now to remove with a curette some vegetations of the endometrium which I find have been excited by the presence of these tumors. Afterward, I explore the womb again. You might suppose I ought to be able with this instrument to tell if there be another polypus inside. Well, so I have often thought myself; but sometimes they elude me. Now, I shall not tease the patient any more, for I trust that I have taken away what was causing her bleeding, and that she will get well.

There is an unsettled question about these vegetations, as I call them, and which, in this case, are about the largest I have ever seen. If examined microscopically, they are found to be papillomata. But, whether they are benign or malignant? That is the question.

I shall now make an application of a saturated tincture of iodine to this womb, to stop the bleeding and to destroy some of the growths that I have probably crushed but not entirely removed.

And now you may ask "Is there any danger in using the curette?" I thought not till about three years ago. I then had a lady, about 70 years of age, who had led a good deal and was thought to have a cancer. I curetted her, and she had an amelioration of her symptoms. After a year I was called again. On repeating the operation I found, after awhile, that my curette would go in much further than the length of the womb. Evidently I had scraped through its thin, old walls. Fortunately no ill effect followed, and the patient improved; but the next time she came to me I did not use the curette; I stuck to local applications. Yet you will find the curette the best instrument you can use. Only you must be careful how you use it.

Laceration of the Cervix Uteri.

This woman has all the symptoms of hysteria—nervousness, wandering pains, disturbance of temper and spirits. On examining her womb we find a lateral laceration of the cervix. The os is patulous and everted, so that its mucous membrane is rubbed by that of the vagina. In this way it is kept abraded, and the glands of Naboth are enlarged, so that they can be easily seen with the naked eye.

Now, gentlemen, this injury was received in childbirth. I know that, positively, in this case. You might say I should know it anyhow; that it could be got in no other way. Experience

has, however, taught me differently; for I have seen cases of undoubted virgins where there was so much "ectropion" of the os uteri as to look exactly like this lesion. On the other hand, such a lesion is a very strong witness to a previous labor. Yet it is remarkable how stoutly some women will deny it. I have seen a number of them who have made such denials in the face of evidence that could not be contradicted; and perhaps you will remember a woman who was before us last winter, asserting emphatically that she was a virgin, on whom, nevertheless, we found, first, *lineæ albicantes*; second, a lacerated perineum, and finally a bilateral laceration of the cervix.

I will now do the operation devised by Emmet. In putting in the stitches you should always count and note how many there are, so as not to leave any behind when you undertake their removal. This is a slip that has been made before now. After closing up the stitches and sending the woman to bed, it is usually necessary to draw off the urine for from forty-eight to seventy-two hours, after which she may pass it herself. If the woman lies on her back, it is well to inject the vagina with carbolized water, to prevent the urine from doing injury to the line of union. If we succeed it will be by getting union by first intention. If we don't, our operation is a failure. The first forty-eight hours tell the story, but I know no operation more successful.

EDITORIAL DEPARTMENT.

PERISCOPE.

New Methods of Removing Intralaryngeal Growths.

To the two well-known methods of removing laryngeal growths, viz., the intralaryngeal operation, in which the growth is removed by various forms of knives, forceps, etc., through the mouth, with the aid of the laryngoscope, and the extralaryngeal operation, or thyrotomy, in which the thyroid cartilage is split in the middle line and the growth removed through the wound, Professor Rossbach, in the *Berliner Klinische Wochenschrift*, No. 5, 1880, adds a third. His operation is a subcutaneous one. Professor Rossbach states that it is easily and quickly performed, is almost painless, requiring no anæsthetic, is attended with the escape of only a drop or two of blood, and is quite devoid of danger; the wound, moreover, heals very rapidly, and requires no after treatment. A small, spear-pointed knife is introduced through the middle line of the thyroid cartilage, a little below the notch, and is pushed through the mucous membrane into the larynx. With the aid of the mirror the knife is then guided to the growth, and its pedicle or base cut through. After the first prick in the skin the patient experiences no further pain. He does not feel the entrance of the knife into the larynx, and its presence there causes neither coughing nor gulping. Should, however, any

such spasmodic movements accidentally occur, the knife need not be withdrawn, but may be allowed to remain passively in the larynx, the handle being merely supported by the thumb and forefinger placed lightly on the thyroid cartilage, so that during the up and down movement of the larynx, the hand, knife, and cartilages move as one piece. With this precaution, wounding of the mucous membrane will be prevented. Professor Rossbach has operated by his method on two patients with entire success. He has also demonstrated, in a large number of experiments on animals, the ease with which the knife can be manipulated in the larynx when introduced subcutaneously. In this way, he states, he has removed, in animals, both vocal cords, and in one case has separated the whole of the mucous membrane from the interior of the larynx. Professor Rossbach was led to devise his operation in consequence of having failed to remove a polypus from a patient who could neither tolerate the presence of instruments in the larynx, when introduced in the intralaryngeal manner, even after months of practice, nor would submit to thyrotomy. The advantages of this operation in such cases he considers obvious. But he also thinks it preferable in a large number of cases usually treated in the intralaryngeal way, since it is more easily performed than the latter operation, and causes much less inconvenience to the patient.

In the same number of this journal another operation for removing laryngeal growths is described, which, however, is only a modification of what is generally known as subhyoid pharyngotomy.

Dr. Carl Langenbuch, after administering an anæsthetic, makes a transverse incision through the skin, between the hyoid bone and thyroid cartilage, separates the muscles from the hyoid bone, and cuts across the thyro-hyoid membrane, immediately above the upper border of the thyroid cartilage, and then makes a median incision through the three-cornered portion of the membrane which lies in the notch of the thyroid cartilage, continuing this incision, as he says, perhaps unnecessarily, through the upper third of the thyroid cartilage. He next divides the root of the epiglottis, and exposes the interior of the larynx by drawing the thyroid cartilage downward and forward by means of strong hooks, so that the growth can be removed through the wound. The operation is attended with but very slight hemorrhage. Dr. Langenbuch states that he has not found this operation described in the larger works on surgery; a similar method of opening the larynx was, however, employed by Professor Roser in 1851, when making some experiments upon animals.

Chian Turpentine in the Treatment of Cancer.

The *Lancet*, for March 27th, 1880, contains a paper by Professor John Clay, of Birmingham, on "The Treatment of Cancer of the Female Generative Organs by a New Method." The remedy he uses is Chian turpentine, and, although his experience extends over a period of only twelve months, yet, from the results which have been obtained from its use during that time, the author asserts that an amount of relief has been secured to the patients put under its influence which has not been afforded by any other mode of treatment hitherto employed. In the first case in which it was tried it was given in doses of six grains, with four grains of flowers of sulphur, every four hours. The patient was 52 years of age, and suffered from scirrhus cancer of the body and fundus of the uterus. Hemorrhage was excessive, and pain in the back and abdomen agonizing, and the cancerous cachexia was well marked. The patient apparently had not long to live. The uterus was extensively destroyed by the cancer, and its cavity admitted three fingers. On the fourth day of treatment by the Chian turpentine the patient reported herself greatly relieved of the pain. The os was found quite contracted, hardly admitting the index finger, and the surrounding cancerous infiltration was much diminished. At the twelfth week examination was made, and the parts felt ragged and uneven, and did not bleed on roughly touching them. Several cicatricial spots were seen per speculum. There was no pain or hemorrhage, and the general health was improved. Other three cases are recorded in the paper, showing similar results from continued use of the drug, the os uteri speedily becoming contracted, and its tissues assuming a more natural and healthy condition. The author concludes that the best method of

administration of the Chian turpentine is to give it uncombined; that its effects are more rapid and more marked when given alone. Whatever be the ultimate results of further experience of this drug, he believes there can be no doubt that in these diseases of the uterus it is a most valuable remedy. In the early stages of cancer, it may be affirmed that a speedy cure may undoubtedly be expected, while in advanced cases of the disease, if the surrounding structures are not too much involved in the destructive process, an ultimate cure may reasonably be hoped for.

The Treatment of Post-Partum Hemorrhage by Hot Water Injections.

Dr. Atthill, in the Annual Report of the Rotunda Hospital, published in the *Dublin Journal of Medical Science*, December 1879, writes, on this subject: "The use of hot water in the treatment of this complication was very frequently employed, both in the hospital and extern maternity, and has proved eminently satisfactory. It has, indeed, much to recommend it, for not only is it a powerful hemostatic and excitant of uterine contraction, but it is also a general stimulant. If used with ordinary care it is not only harmless but beneficial, by thoroughly cleansing the uterus from clots, portions of membrane, etc., which may have been left in its cavity." It will not, in Dr. Atthill's opinion, be found altogether to displace the use either of cold water or of the perchloride of iron, but rather to be applicable to a distinct class of cases in which the former of those remedies would be unsuitable, and the latter unnecessary. The method of carrying out the practice is exceedingly simple. An ordinary syphon syringe is the only instrument required, though one with a long vulcanite nozzle, specially constructed for vaginal and intra-uterine injection, is now used. This is carried up to the fundus, and, with the usual precautions against injecting air and securing a free return, water is injected as hot as can be conveniently borne by the hand, i. e., about 112 deg. Fahr., in a full stream into the cavity, continuing this until a good contraction is secured, and the water returns quite clear and colorless. The following are some of the results of the experiences in the use of hot water. 1. In cases of sudden and violent hemorrhage in a strong and plethoric woman, it is better first to use cold. 2. Where, from the prolonged or injudicious use of cold, the patient is found shivering and depressed, the beneficial effect of injecting hot water is rapid and remarkable. 3. In nervous, depressed, and anæmic women, hot water may at once be injected without previously using cold. 4. In cases of abortion, where, from uterine inertia, the ovum, although separated from the uterine wall, is wholly or in part retained, the injection of hot water is generally followed by most satisfactory results. 5. Where the injection of the perchloride of iron is considered necessary, previous injection of hot water clears the uterus of clots, etc., permitting the fluid to come directly into contact with the bleeding surface, and lessening the chance of septic absorption.

A Remarkable Case of Hermaphroditism.

The *St. Louis Medical Journal*, May 20th, 1880, contains a report of the following curious case, as related by Dr. Gregory at a recent meeting of the St. Louis Medical Society:—

I saw to-day another case of which I have never seen a counterpart. A person, nineteen years of age, presented himself at my office—a handsome person, with the configuration of a man, and having a beard. Upon examination, I found he had a perfect vagina and female urethra; the labia, internal and external, perfectly formed, and a diminutive organ corresponding precisely to the anatomy and occupying the site of the clitoris and projecting out beyond, so that I supposed it was about the size of my thumb. It was erectile when I examined it, and I think it was about as long as my thumb. The glans penis was perfectly formed but the meatus was wanting, and the corpus cavernosum was wanting. There was a notch corresponding with the meatus, and upon pressing this back under the pubis the urethra was easily made out. There was nothing like a uterus, and the vagina terminated about three inches from the surface in a seeming cul-de-sac, so that the finger in the rectum could easily feel the catheter in the bladder, showing that there was no uterus between the finger and the instrument. There was no bloody flux—no menstruation. No development of the breast; no testis, that could be found. He has precisely the feelings of a man, and has experienced the orgasm occasionally, and has been guilty of self-pollution. He is anxious to get married, and the question was very pertinently asked whether he proposed marrying a man or a woman. I told him I could not advise him to get married. He asked me if I thought there was any danger of his transmitting his peculiarity to his progeny, and I told him I thought there was some danger, because I really thought it was my duty to dissuade him, and it was a question whether he could not be much more readily converted into a woman than into a man, because the removal of this rudimentary penis would leave him, so far as appearances go, a perfect female. The labia were perfect, and it is remarkable that while he has precisely the general configuration of a male, with local appearance of a female, he is a handsome man, and has a beard and a voice like a male.

Restoration after the Hand is Completely Separated from the Arm.

L. L. Staton, M.D., Tarborough, N. C., writes, in the *North Carolina Medical Journal* for May, 1880—

On Friday afternoon, February 5th, 1880, I was called to see Mary Sumlin, a white girl, aged eleven years, quite anemic and rather small for one of her age. While helping her mother to procure firewood she placed her hand in the way of an axe, and at one blow had it severed from the styloid process, diagonally across the trapezium, passing through the scaphoid bone and posterior annular ligament, dividing all the muscles, bones and blood vessels, and completely separating the hand from the arm, excepting a small portion

of skin below the articulation with the ulna. The hand was hanging at right angles to the arm when I saw her, about thirty minutes after the accident.

I determined at once upon amputation at the joint above, the wrist, so returned to my office, a distance of half a mile, to procure the assistance of another physician; but finding this impracticable, I proceeded carefully to replace the hand, which was held securely in position with silver wire sutures and adhesive plaster.

In dressing the wound the patient complained of pain when I used the needle in the arm, but none when it was used in the hand.

I secured the hand and arm upon a broad splint and directed that they be kept warm by being wrapped in hot flannel cloths.

I saw her twelve hours afterward; the hand was very much swollen; no sensation or pulsation could be detected, nor had she complained of any pain, but rested quietly during the night.

Saw her the next day; she now complained of a little pain, but the hand and arm presented the same appearance as yesterday.

Saw her upon the third day; could now plainly feel pulsation in the hand; it had changed its color, and I now, for the first time, thought it possible to save the hand. From this time she did not have a bad symptom, nor was there any supuration or secretions of any kind; the wound healed entirely by first intention.

I removed the sutures upon the fourteenth day, and afterward she carried the hand in a sling, and is now able to extend the fingers and grasp with nearly the usual strength. There is no ankylosis of the wrist joint, as I expected.

Acute Phthisis in a Dog, from Direct Contagion.

D. H. Gullimore, M.K.Q.C.P., reports the following case in the *British Medical Journal*, May 22d, 1880:—

About six years ago, when I was acting as Residency Surgeon at Mandalay, a Bengalee servant, suffering from advanced pulmonary consumption, with copious expectoration, came under my notice. One of my dogs—a pariah—developing his natural talents as a scavenger, was, as I afterward learned, in the habit of frequently visiting the house of the sick man, and lapping up the expectorated matter. How long this had been going on I cannot with certainty say; but a few days after the death of the man the dog appeared out of sorts, refused his food, rapidly emaciated, had a cough, which increased quickly in severity, and was attended later on with a tenuous and glairy discharge from the mouth and nose. The stethoscope detected moist râles, with rhonchus and sibilus over a greater part of the chest. These symptoms continued to grow worse for a week or ten days, when convulsive fits of about five minutes' duration, and occurring several times in the course of the day, made their appearance. These fits were of an epileptiform or tetanic character. The poor animal moaned a good deal and appeared in great pain as he lay on his back reeling and kicking about. On the second day from the commencement of the fits, and about the twelfth from the beginning of the disease, there

being but little hope of recovery, a large dose of prussic acid was given, which speedily proved fatal.

The post-mortem inspection was limited to the contents of the skull and the chest, as these were the parts supposed to be more prominently diseased, and in both were found lesions to account for the symptoms during life, and their probable cause. Both pleuræ were adherent, the adhesions being recent; and the lungs were studded with softened patches, in varying stages of caseous degeneration, many of them containing muco-purulent matter, with which the minute and larger bronchi were also clogged. I did not notice the state of the bronchial glands. The brain did not show much signs of disease, and nothing similar to what existed in the lung. The membranes appeared thickened and congested, and on cutting them a good deal of serum exuded; there were no tubercular or cheesy deposits; the whole mass was uniform, and appeared softish, but I had no previous experience of the canine brain, and cannot speak with certainty.

REVIEWS AND BOOK NOTICES.

NOTES ON CURRENT MEDICAL LITERATURE.

—We acknowledge the receipt of Dr. G. Beck's *Therapeutischer Almanach* for 1880.

—We have just received the Announcement of the Medical Department of the University of Pennsylvania for the one hundred and fifteenth annual session, 1880-1881; and also the Second Annual Announcement of the Arkansas University Medical Department, session 1880-1881.

—"Interpretations of the Structure and Function of the Kidney," by Andrew W. Smith, M.D., of New Orleans, La., reported by John Gamgee, has been sent us in a neat pamphlet form, reprinted from the *New Orleans Medical and Surgical Journal* for May, 1880.

—We acknowledge the receipt of the First Biennial Report of the Department of Diseases of the Eye at the Central Free Dispensary of the District of Columbia, 512 and 514 Sixth Street, Washington, D. C., by Dr. Swan M. Burnett, Surgeon in charge; and also the Report of the Board of Managers of the Pennsylvania Hospital, together with the accounts of the Treasurer and Stewards.

—*Quarterly Epitome of Medicine and Surgery*, is the name of a new journal published by W. A. Townsend, New York, being an American supplement to "Braithwaite's Retrospect." The first number, of 160 pages, contains abstracts of articles from various journals, and we find every department of medicine and surgery

is well represented. Subscription price \$2.50 a year, in advance; quarterly parts 75 cents.

BOOK NOTICES.

Water Analysis for Sanitary Purposes. With Hints for the Interpretation of Results. By E. Frankland, PH.D., D.C.L., F.R.S., Vice-President of the Institute of Chemistry of Great Britain and Ireland, Professor of Chemistry in the Science Schools, South Kensington, etc. Philadelphia, Presley Blakiston, 1012 Walnut Street, 1880. Cloth, 12mo, pp. 149. Price \$1.00.

After a brief introduction, in which complete and partial analyses of potable water, together with determinations, necessary and unnecessary, for sanitary purposes, are discussed in a general way, and directions for the collection of samples of drinking water for analysis are given, the author proceeds to the description of the various methods of water analysis, taking up first "Water Analysis without Gas Apparatus," and then "Water Analysis Requiring Gas Apparatus," which descriptions take up the first 107 pages of the book. To this is added an Appendix containing a list of the reagents necessary, together with various tables, and the "Conclusions and Recommendations of the Rivers Pollution Commissioners, with Standards of Purity Recommended by the Same." The work is one which physicians practicing in the country and in villages and towns remote from medical centres cannot afford to be without.

The Black Arts in Medicine, with Anniversary Address, by John D. Jackson, A.M., M.D. Edited by L. S. McMurtry, A.M., M.D. Cincinnati, Robert Clarke & Co., 1880.

This is a neat little volume of seventy-four pages, containing a very suggestive and amusing letter from Dr. Solomon Machiavelli Sharpe, A.B., A.M., M.D., etc., who is "a successful doctor, retired after a forty years' practice," to his nephew, John Charlatan Greene, M.D., a young physician, just entering upon his professional duties. The letter is replete with excellent advice as to the best method of gaining a large practice, "by fair means and foul," and yet retaining a place among the members of the regular profession. A very able anniversary address before the Boyle County (Ky.) Medical Society, delivered January 5th, 1869, has also been added. The book is very entertaining.

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A WEEKLY JOURNAL,
 Issued every Saturday.

D. G. BRINTON, M.D., EDITOR.

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THE VIABILITY OF RACES.

The vitality, or rather, viability, of races of men appears to differ as much as it does in individuals. The influence which this has exerted on the history of the world has not yet been estimated; what it may exert in the future cannot be guessed. It is one of the great factors in universal history, as it is one of the great problems to the sanitarian.

The potency of life does not bear a direct ratio to the intellectual activity of a race, or even to its physical energy in its individual aspect. Certain races not highly gifted in these respects persist and increase under unfavorable circumstances, while others, quite distinguished at one period, disappear at a later one.

Among the races of least viability appears to be the Papuan stem, whose branches inhabit the islands of the Australasian Archipelago, and the mixed Malayan race who people the islands of the South Sea. The natives of Tasmania, once well populated, have died out to the last man; those of Australia are disappearing with equal rapidity; the sturdy and warlike New Zealand-

ers fare no better; while in the Sandwich Islands and other Pacific groups the native population dwindles year by year, although Christianized and civilized.

Whether the aboriginal race of the United States has actually diminished in number has lately been called in question. A well known student of Indian life has marshaled a number of plausible arguments to show that the natives were greatly over-estimated by the early explorers, and that they have not decreased, at least since a careful enumeration of them from time to time has begun. Certain it is, however, that whole tribes of them have perished; scores of languages of which the early writers collected fragments are not now spoken by a single living representative; extensive nations have vanished into nothingness. They too, we believe, are a race devoid of viability.

Many causes have been assigned by medical observers and philanthropists for these instances of national extinction. The introduction of new diseases, the consumption of alcohol, the use of weapons of a more deadly character, the discouragement which a strange and powerful civilization impressed on them, all these have doubtless been active agents. But the radical cause was their inferior vital energy. This is proved by the fact that other races have met unharmed all these deteriorating agencies. Take the African Negro. He has been subjected to them all, without any disastrous effect. Even under the severe conditions of slavery he has steadily increased, wherever the climate was warm. The limit to the progress of the colored race is, however, sharply defined. North of the 40th parallel, in the United States, its members regularly diminish. Their mortality is mainly attributable to pulmonary affections, to which they are far more prone than whites. Even in Alabama and Georgia the deaths from diseases of the respiratory organs are over forty per cent. of the total, which is nearly double that of the whites from the same class of diseases.

The two races of the greatest viability—if we leave out of consideration the Chinese, whose introduction into distant lands has been too re-

cent to furnish exact data—are the Latin and Anglo-Saxon branches of the great Aryan stem. The strong impress of ancestral conditions render the Latin race active in warmer climes, but of little power to resist the cold of high latitudes; while in all their numerous colonies the Anglo-Saxon race has succeeded markedly only in the limits of the temperate zone.

There are few subjects more attractive to the physician of philosophical mind than the investigation of such problems as are here presented. As the preservation of life and the cultivation of vitality are his special aims, he here sees these presented in their broadest aspects. On what physical peculiarities, what hereditary powers, what mental habits this race viability depends is an inquiry he can turn to with infinite zest, and the promise of large profit. Were it solved, we could read history with different eyes, and have the future of the world mapped out before us.

The attempts of the thoughtful Draper and the ingenious Buckle, to bring history under the control of physical laws, were meritorious but incomplete. Both looked too much at the mere environment, too little at man himself; he can never be understood, his story can never be rightly written, until his duplicate nature is allowed and accounted for.

PHYSICIAN AND DRUGGIST.

There appears to exist at the present time somewhat of a misapprehension of the true relations of the physician and the compounder of drugs. Druggists do not object to the title of doctor from the public; and we hear very much, of late, of the two (!) professions, medicine and pharmacy; mentioned as if upon the same footing and equal in their claims to public consideration; whereas, in truth, pharmacy is not a distinct profession, but is merely a department of medical science; a just estimate of its importance will not be obtained if this fundamental fact be forgotten.

At an early stage of the evolution of the medical practitioner, as every one knows, he compounded his own prescriptions and delivered them himself. Indeed, this is still the case in many

sparsely settled communities. Experience, however, taught that the compounding of medicines consumed valuable time, and retarded the advance of the art; while, with enhanced skill came more engrossing practice as the community increased in size, so that the mixing of drugs was at first partially, and then completely, entrusted by the doctor to his student or clerk. A demand was thus set up for qualified assistants, as the art of prescribing became more developed, and the nice manipulations of pharmacy cultivated. Finally the qualified assistant opened a central shop, for the convenience of several physicians, and took apprentices of his own. Thus the prescription clerk became the apothecary, as he now exists in every large town and city in the country. Thus far we recognize everything as legitimate, right and proper. The functions of physician and pharmacist correspond but do not conflict; it is due to this division of labor that the medical profession has been relieved of a burden, and that an additional guarantee is obtained for the purity of drugs. It may also be claimed that an extra safeguard is obtained against mistakes in writing prescriptions; but as apothecaries can lay no more claim to infallibility than physicians, it is not impossible that this is counterbalanced by the possibility of errors in compounding, which are not entirely unknown to the community. So far, however, we claim a legitimate sphere for the pharmacist, the ally of the physician.

But what if the pharmacist become the rival of the practitioner? What if the prescription of a physician be repeatedly renewed, without authority, until such a trade is established for it that it is sold in large quantities, and is converted into a proprietary medicine owned by the druggist? What if patent medicines be exhibited, guaranteeing cures for maladies that the honest physician is obliged to declare incurable? What if the druggist boldly assume the rôle of physician, and prescribe over the counter, thus building up a large office practice? What if the said druggist, without any authority to practice medicine, surreptitiously prescribe for delirium tremens, and visit cases of croup, in active competition with neighboring physicians? And

yet it is no secret that these things and more are done every day, and in Philadelphia.

It has been said that there are over seven hundred drug stores in this city; that not one of them would be able to pay its expenses if confined to its legitimate business of compounding prescriptions. It is alarming to contemplate the vast amount of trashy proprietary medicines that are sold in this community, in order to make a living for the large excess of druggists. Scarcely a single store is free from the opprobrium of counter prescribing. In the minds of many it is high time that, in the best interests of the community, as well as of the profession, some remedy should be adopted for these growing evils. Drug stores must be established, where no patent medicines are sold, and where the pharmacist shall respect his calling as well as that of the physician. If druggists will not do this, our leading physicians will, in self-defence, establish central offices of this kind, which shall be kept fully under the control of the profession.

As an aid to medical practice, pharmacy has a legitimate claim to recognition and respect; but when the druggist becomes the antagonist and rival to the physician his fate it is not difficult to foretell. He may flourish for a time, like the bay tree, but his end will be destruction. Rather than weakly submit to such gross abuse of trust and unfair competition, the medical profession will reluctantly resume its former function, and every doctor be his own druggist.

NOTES AND COMMENTS.

Therapeutical Notes.

QUININE OINTMENT IN MALARIAL FEVER.

Dr. John Shrady, of New York, employs with success the following method in the case of children where great irritability of the stomach exists, and where the internal administration of quinine is otherwise contra-indicated:—

Denude the cuticle at the epigastrium by means of a blister, of the size of half a dollar, and then apply the following:—

R. Sulph. quiniæ, ʒj
Cerat. simpl., ʒj. M.

Sto.—Spread on lint and renew the dressing morning and night.

He has in this way obtained the characteristic effects of the salts, as indicated by the decline in temperature and the abbreviation of the paroxysms of fever. As the surface of the sore ceases to be absorbing after the third day, a repetition of the process in the immediate neighborhood may be, although rarely, necessary.

THE LOCAL APPLICATION OF WARM VINEGAR AND MULLEIN IN SCIATICA.

Dr. John P. F. Brunner, of Stine's Corner, Lehigh Co., Pa., writes to the *Journal of Materia Medica*, that the local application of mullein (*Verbascum Thapsus*) leaves, dipped in warm water and placed along the course of the sciatic nerve and around the joints of the affected limb, was followed by immediate relief in a case of sciatica after other remedies had failed.

Neurasthenia.

The London *Medical Record* informs us that Dr. Stretch Dowse recently read a paper at the Medical Society of London, on neurasthenia of the brain and spinal cord. He stated that Dr. Beard, of New York, was the first physician who drew the especial attention of the profession to the sign and symptoms of this disease, and that Erb, in Ziemssen's *Cyclopædia of Medicine*, Vol. XIII, had devoted a special chapter to what he called neurasthenia of the spinal cord. Dr. Dowse remarked that for many years he discarded the term neurasthenia, for the reason that when he was in the midst of pathological work he thought that the term was vague and unscientific, and he expected that the scalpel and the microscope would reveal the cause of any arrest of nervous function; but he had grown wiser in this respect, and he now thought that the term neurasthenia was applicable to a large number of nervous derangements. Sleep was due to nervous exhaustion, consequent upon an arrest of function in the hemispheres of the brain, and during this temporary arrest of function the trophic or nutritive elements of the brain were still actively employed, and the cells of the brain were being recharged with nutritive pabulum in the form of bioplasm. In the consideration of the asthenic or exhausted state of the nervous system, we had to find out whether the arrest of nervous energy was vital and general, or whether it was local and circumscribed. And the former condition was seen and illustrated during the course of many acute diseases, but in none so vividly as in diphtheria, where the patient, as a rule, died from exhaustion of the nervous centres, which gave motor power to the walls of the heart. Dr. Dowse said that in

the inorganic world matter and energy were indissolubly associated; that we knew of matter only through the transformation of energy, and that we recognized energy only through its affections of matter; that matter and energy were more or less strongly united according to their power of resistance, and so it was in the organic world. Life and vitality were, according to Sir W. Gull, a correlation of energies or forces. Dr. Dowse stated that the brain, and consequently every individual cell of which the brain was composed, was a factor as well as a nidus for the conservation of energy. Molecular displacement in the nerve centres meant the exercise of disruptive energy, which led to a failure in the power of resistance, a diminution of vitality, a lowering of tension, a decrease of tone, and an exhaustion of the nervous system; in fact, an arrest of function and molecular inertia. He said that the energy or force with which a nerve cell is specially endowed may be divided into three parts: first, the active, or floating, or automatic energy; second, the complementary energy; and third, the residual or latent energy. He had little doubt that most functional troubles of the nervous system were due to the want of an equable development of stable energy, which resulted from abnormal molecular interchange, inducing defective correlative integrity of certain individual cells or groups of cells. Dr. Bence Jones held the view that death consisted in the stoppage of the conversion of latent force into active force, caused by some arrest of action in the heart, lungs, or brain. Heat and energy are the result of molecular motion; vitality is co-existent and absolutely dependent upon motion. The energy dependent upon either physical or vital motion becomes expended and finally exhausted; and the great problem which practitioners of medicine had to solve was, "In what manner can we best determine that amount of conservative energy in our bodies which shall render the supply of nerve force equivalent to the demand?" Man's power of health, or, in other words, his resisting power to overcome the exhausting influences which surround him in almost every sphere of life, is due and in proportion to the inherent power possessed by his nervous centres to conserve those forces which correlatively make up his vitality. Dr. Dowse then went on to the consideration of the differential diagnosis between neurasthenie of the nervous system, which for years remained a mere functional affection, and neurasthenie which were due to intractable arrest of development in the nerve cells, and which led on to defective

nutrition of the nervous centres, and ultimately to organic disease; such, for instance, as were found to be associated with some forms of mental derangement, and with many forms of paralysis. He stated it to be his firm belief that many of the incurable cases of insanity, locomotor ataxy, progressive muscular atrophy, and many other diseases of the brain and nervous system, commenced as a neurasthenia of the nervous centres, and when in this state, such conditions were quite amenable to treatment. Dr. Dowse then reviewed the signs and symptoms, bodily and mental, of an exhaustion of the brain and spinal cord, drawing attention to the effects produced by overwork and worry, and he lastly considered the treatment of this disease. In this question he quite agreed with Dr. Beard, that there was no routine plan for treatment in these cases. Each case must be studied closely and carefully by itself. Iron and quinine were much less valuable than other drugs, such as arsenic, phosphorus and strychnine. Dr. Dowse was not in agreement with many observers concerning the value of either galvanism or faradization; for in his hands, although it never failed to give great relief during its application, and it may be for some hours after, yet the good effects soon wore off, and left the patient no better than before its application. He said that the drug upon which he chiefly relied was opium—the pure watery extract of opium—in doses of a quarter of a grain three or four times a day. In certain cases it acted like a charm; it excited and stimulated for a short time the brain cells, and then left them in a state of tranquillity which was best adapted to their nutrition and repair. He concluded his paper by referring to the benefit of proper feeding, and the judicious use of stimulants, travel, and rest.

Pathological Condition of the Spinal Cord in Phosphorus Poisoning.

Dr. Danillo, after observing that little has been done with reference to the influence of phosphorus poisoning on the spinal cord, furnishes an account in *St. Petersburg. Med. Woch.*, May 8th, of the results of a series of experiments which he has performed in Prof. Mierzejewski's laboratory by administering large doses of phosphorus to dogs. He describes at length the appearance of the spinal cord, and thus sums up the results of his investigations: 1. Large doses of phosphorus, given at short intervals, induce acute parenchymatous myelitis, with massing of pigment and extravasations of blood. 2. Continued for a longer time in smaller doses, it gives rise

to myelitis centralis in all its stages. 3. According to the dose of phosphorus exhibited, myelitis of different degrees of intensity may be produced. 4. In phosphorus poisoning a large amount of pigment formation takes place—a fact which no one has hitherto recorded. 5. As myelitis can be produced by phosphorus, it becomes highly probable that a portion of the complex nervous symptoms which poisoning by this substance gives rise to may be the clinical expression of the myelitis which has been induced.

Pneumonia with Cerebral Shock.

Dr. C. Bareggi, in *Gazetta degli Ospitali*, No. 58, gives the history and post-mortem appearances of a case in which a patient, suffering from pneumonia in its first stage, precipitated himself from a balcony, thereby inducing concussion of the brain, and death within eighteen days. Examination of the encephalon after death showed that there had been no fracture of the skull nor rupture of the dura mater. The superior portion of both cerebral peduncles was extensively softened; the left lateral sinus contained a fibrous coagulum, but the superficies of both hemispheres were apparently normal, both as regards color and consistence. In the medullary substance of the right posterior lobe of the cerebrum there were numerous spots of capillary hemorrhage, together with similar, but more sparsely occurring, foci in the left hemisphere of the cerebellum, between its external layers and the corpus rhomboideum. The corpus callosum in its totality, the septum lucidum, and the gray commissural substance of the optic thalami were softened, and "literally riddled" with hemorrhagic foci. The corpora quadrigemina and the floor of the fourth ventricle had also shared in the softening process. Many puncta cruenta existed in the left corpus striatum, the cerebellar peduncles and the bulb. The two latter of these were of normal consistence. The right lung was in a state of red hepatization, merging into gray at the apex. In commenting on the above appearances, the author remarks that, during the time which elapsed between the date of the injury and the patient's death, three symptoms were peculiarly conspicuous, viz., loss of consciousness and voluntary movement, epileptiform convulsions, best marked on the right side, and hyperæmia of the skin, with generalized high temperature and profuse diaphoresis. The first of these he considers satisfactorily accounted for by the lesions found in the cerebral peduncles, which were sufficient to destroy all power of conduction; the second, after considering various

hypotheses and possibilities, he thinks to be best explained by the hemorrhages found in the medullary substance of the left hemisphere of the cerebellum, which must have been potent causes of irritation to the nerve tubules immediately around them. In the absence of any apparent lesion of the sympathetic system, the third symptom was probably due to commotion of the vaso-motor centres. These the author locates on the floor of the fourth ventricle, four or five millimeters from the tubercula quadrigemina, in the protuberance, and in the cerebellum; parts which indirectly shared in the injury, and are actually found after death to be more or less congested. As regards the deeper-seated injuries and changes observed, such as the capillary hemorrhages, etc., when not the direct consequences of the mechanical shock, as no doubt they were in the left corpus striatum and left hemisphere, the author considers them due to the violent passage of a wave of cerebro-spinal fluid through the channels of communication which exist between the various portions of the encephalon.

Excision of Tuberculous Joints.

We learn, from the *Medical Times and Gazette*, May 22d, 1880, that at the recent meeting of the German Surgical Society, at Berlin, Prof. König read a paper "On the Results of Excision of Tuberculous Joints under the Antiseptic System." The number of excisions was 117, viz., 43 of the knee, 25 of the foot, 21 of the hip, and 28 of the upper extremity. Of these 74 were cured, but in only four instances by primary union; in the others either fistulæ remained or were formed at the end of several weeks. In 66 of these cases it was found, after periods from six months to two years, that complete healing had not taken place. In 18 of the 117 cases the wound remained tuberculous, and 25 terminated fatally, death resulting in two cases from "acute carbolismus," in 2 from sepsis, in 2 from tetanus, and in 18 from tuberculosis. According to König's four years' experience with the antiseptic procedure, 21.6 per cent of the cases had already died or were suffering from general tuberculosis, a result nearly approaching that of Billroth's sixteen years' practice, which was attended with a mortality of 27 per cent. Prof. Esmarch's experience led him to the same conclusion, that the antiseptic procedure did not do much to save life in diseases of the joints, but he suggested that an earlier resort to the operation would be attended with better results; but Prof. König stated that, according to his experience, this did not influence the result.

Effects of Belladonna in a Case of Heart Disease Complicated with Disease of the Kidneys.

The *British Medical Journal*, for May 29th, 1880, contains a brief report by Dr. Michie of the case of a woman, aged seventy, suffering from enlarged heart, with slight mitral regurgitation and chronic kidney disease, probably large white kidney. There was anasarca over all the body, and there was also ascites. The breathing was much oppressed, especially toward two or three in the morning, when she had to be raised up in bed and have all doors and windows opened, to prevent impending suffocation. After the ordinary treatment, including stimulants, diaphoretics, diuretics, purgatives, cardiac tonics, with counter-irritants, fomentations, leeches, and dry cupping, had been tried for three months, with little or no effect, a belladonna plaster (nine inches by six) was applied over the heart, and this entirely relieved the difficulty of breathing in five or six days; the anasarca disappeared, the abdominal organs and lungs appeared to regain their normal condition, she relished her food, and could sleep eight hours at a time without being raised up in bed. The improvement continued for about twenty-one days, when, from over exertion, she fell into a comatose condition, and died a few days afterward, in a state of muttering delirium.

Humanity in Hanging.

The *Lancet*, May 22d, 1880, remarks that society prides itself on being humane, even in its most vindictive moods. It would not needlessly, still less wantonly, prolong the torture of a criminal dying at its hands. In the extremest severity of justice it would remember mercy. It can, therefore, only be necessary to point out to those in authority, and even to the common hangman, that by lengthening the rope by which a malefactor is to be strangled, in order to give him a "long drop" and thereby accomplish what is erroneously called "instantaneous death," a new horror may be introduced into the act of execution. An appreciable time, which may seem an eternity, is occupied in the act of falling. We know, by the study of dreams, and the recollections of persons who have been half drowned, or stood for a moment face to face with death in one of his most appalling forms, how much may seem to happen in an instant! What torture may not the criminal experience falling some nine feet with a rope round his neck? We recognize the aim of the executioner, and approve it; but there is an obvious limit to the pursuit of one humane purpose at the risk of

creating an evil worse than that it is desired to remedy.

Arsenic in Albuminuria.

According to Bouchardat, Semnola advises, in *Lyon Méd.*, the use of granules of arsenious acid in Bright's disease, and when the milk treatment is in force he begins the administration of the medicine with the return to a meat diet.

Prof. Jaccoud has observed that arsenic facilitates the absorption of the albuminoids, and the researches of Brunton appear to confirm this view. The latter has found that in certain cases the absorption of albuminoid matter by the intestine is a cause of albuminuria of an intermittent character, and therefore, that in digestion the utility of arsenic is demonstrated.

CORRESPONDENCE.

Ergot in Ante-Partum Hemorrhage.

ED. MED. AND SURG. REPORTER:—

In the issue of your medical journal for May 22d, 1880, I saw a communication from Dr. Nye, on "Ergot in Ante-partum Hemorrhage Caused by Separation of the Placenta from its Uterine Attachments," which brings to my mind two cases that I have had of that nature in the past three years. As they may be of interest to the profession I will give a synopsis of them. One reason why I value the MEDICAL AND SURGICAL REPORTER is because of the nature of its contents, which are of importance, not only to the professor and lecturer in the great medical colleges and large cities, but to the general practitioner in the remotest region of the country. I prize a journal most that gives me information on subjects which I cannot get from my text books, that is, clinical reports of diseases and their treatment. We want the experience of the profession, as brief as is consistent with the nature of the subject.

The two cases which I referred to were treated with fluid extract of ergot alone, in the first instance, and ergot combined with tinct. opium in the second. If I will not be taking too much space in your esteemed journal, I will give a short account of the cases and their treatment.

CASE I.—Mrs. G., mother of several children, called me, for the reason that she had become alarmed on account of periodical attacks of hemorrhage, apparently from the uterine cavity. She being now in the seventh month of pregnancy and suffering from bleeding, which had continued more or less since the fifth month, at once excited my interest in her case. I suspected that it was an instance of placenta prævia, but vaginal examination did not reveal anything, as the os uteri was not sufficiently open to admit of the introduction of my finger. I knew that in all probability I had either placenta prævia or a partial detachment of the placenta from the uterine parietes. The patient had worked hard, and yet

had no knowledge or remembrance of injuring herself in any way. She was not suffering much from pain at the time I saw her, but was pretty weak. I at once placed her in bed, in the usual position for cases of hemorrhage, and requested her to stay in that posture for a few days. I prescribed cool drinks and fluid extract of ergot, in twenty-drop doses, every four hours. She improved, the hemorrhage stopping in a short time, and the patient was allowed to be around the house, but prohibited from lifting or being long on her feet, until after confinement. About the eighth month of pregnancy she had another and very severe attack of hemorrhage, the bleeding being very profuse.

It is well for me to say that the medicine had been continued only about one-half the time since I first saw the patient. She was again placed in the recumbent position and the same treatment instituted, in half-drachm doses, however, every four hours. Examination per vaginam now disclosed to me the fact that I had not placenta prævia to deal with, as the os was sufficiently open for me to ascertain that. From this time on, until the middle of the eighth month, the bleeding did not entirely cease, but was not at any time so profuse that I deemed it necessary to resort to the vaginal tampon. About this period Dr. W. saw the case with me and concurred in the diagnosis (as probably one of detached placenta), and advised continuance of treatment. Almost any time now I expected to be called upon to assist her in labor. I saw the patient as often as I could, being quite a distance away, and requested some of the family to be in readiness to call me if pains came on. Not long after I was hastily summoned to see her, early in the morning, the messenger stating that Mrs. G., was very low, and that they wanted me right away. I certainly was very expeditious, and when I arrived at the bedside of the patient was very much surprised and gratified to find her in a very good condition, and the child not only born but the placenta also delivered, and no hemorrhage now. The babe was very feeble and small, weighing only two and a half pounds, but lived, and is now a strong and healthy child, and I have lately treated it for a large nevus on the abdomen.

The patient recovered without any trouble. I attribute the successful result to the effect which the ergot produced on the uterine sinuses, in closing them, and in exerting a continuous pressure on the contents of the uterus, so as to prevent the loss of any large amount of blood. When the critical moment came for the expulsion, the uterus throwing off the child and placenta at the same time is evidence to me that the contraction was strong and steady. Examination of the placenta at the time showed very plainly where the detachment had taken place—near the circumference—so there could not have been any cessation of the hemorrhage, except from uterine pressure, etc.

CASE 2.—Mr. C. sent for me to meet Dr. B. in consultation, as his wife was in a very critical condition. I found the lady almost bloodless when I arrived. The doctor stated that he came to the bedside of the patient about six hours previous to my arrival, and found her flowing very

bad, and seeing the alarming condition of the patient, and believing that she could not possibly survive the delivery of the child, sent immediately for me. And as he had neither ergot nor obstetric forceps with him, the messenger asked me to come as soon as possible. The patient was placed in the most favorable position to check hemorrhage, and as the doctor had made a vaginal examination and could not reach the os uteri, and therefore, could not ascertain the position of the fetus, or condition of the mouth of the womb, and as the bleeding continued, we concluded to place her on drachm doses of fluid extract of ergot, giving two doses in half an hour, and also one drachm dose of tinct. opium. After waiting about half an hour, I found that there was some contraction, which could be felt through the abdominal walls. Dr. B. administered ether very sparingly, as we did not deem it advisable, in the almost unconscious condition of the patient, to give the anæsthetic in sufficient strength to produce insensibility; so we only pushed it far enough to get its stimulating effects. I then proceeded to extract the child and placenta. I supposed that in all probability the babe was dead. On introducing my hand I was surprised to find that I could not easily touch the os, but after a prolonged effort, succeeded, after making considerable pressure externally, in ascertaining that the presentation was a dorsal one, or that the child was lying crosswise in the uterus. I carefully changed the position, and rapidly as consistent with the condition of the lady, and the danger of the uterus not following by contraction the receding contents, delivered the patient by podalic version. The placenta came into my hands before the fetus, which I account for by the fact that it had become detached several days previous over its entire surface, and during the operation of turning was pushed out of the womb, the decomposed fetus immediately following. It certainly would have been sure death to the patient to have turned and delivered the child in the inert condition of the uterus, without giving something to bring into action the then powerless organ, but by administering ergot in sufficient dose at once, and using the tampon, as we did while waiting for its action, we were able to avert an apparently fatal termination, and to save a valuable life. The lady is now in very good health.

I never respond to a call in a case of pregnancy or labor without my bottle of fluid extract of ergot and obstetric forceps; in fact, I always carry ergot with me when going out of the village, as I make use of it in most cases of hemorrhage.

G. H. LATHROP, M.D.

Wurtsboro, N. S., June 8th, 1880.

NEWS AND MISCELLANY.

Items.

CORRECTION.—In the proceedings of the Pennsylvania State Medical Society, on page 494, second column, Northampton county is reported among the counties which had not appointed a Board of Medical Examiners to examine students on preliminary studies. We have

been requested to correct the same, as said county has a Board of Examiners.

The following errors occurred in the printing of Dr. W. O. Stillman's article on "The Mineral Springs of Saratoga": On page 446, second column, seventh line from bottom, for *mariated* read *mineral*. On next line, and also on page 448, first column, twelfth line from bottom, for *Hathorn* read *Hathorn*. On same page, second column, 7th line from top, for *dietetic* read *diathetic*.

—There are, according to the Chicago *Medical Gazette*, in the State of Illinois, 4850 exponents of the healing art, of whom 3846 are physicians, 456 are eclectics, 437 are homœopaths, 37 are "fizzle-o-medicals," and 374 are "go as you please" prescribers.

A Calculating Boy.

The *British Medical Journal*, May 22d, 1880, informs us that at the last meeting of the Anthropological Society M. Broca exhibited a human phenomenon in the person of a young lad, aged 11, a Piedmontese, named Jacques Inaudi. He left his native place a short time ago, and in company with a monkey, he earned his livelihood by begging. When his appeals in the ordinary way were not attended to, he offered to solve mentally in a few minutes, and without any assistance of any kind, the most difficult problems in arithmetic. He was often put to the test, and during his sojourn at Marseilles, a gentleman to whom he had appealed for charity was so astounded with the lad's gift of calculation, that he was induced to bring him to Paris as a curiosity. When M. Broca presented him to the Society, he gave him verbally a sum in multiplication, composed of some trillions to be multiplied by billions. This he accomplished in less than ten minutes, mentally and without any aid whatever, in presence of the members, who were all struck with wonderment. The lad is far from intelligent in other respects, and can neither read nor write; and the most curious feature of his method of calculation is, that he proceeds from left to right, instead of from right to left. He is of the ordinary stature of his age; but his head is rather large and somewhat hydrocephalous in appearance. His forehead is high, and developed to an extraordinary degree. The question of the localization in the brain of such a function is as yet a mystery.

Electricity in the Human Body.

The *Lancet*, May 22d, 1880, contains the following paragraph, on the varying "electrical condition" of negroes, extracted from the *Eastern Morning News*:—

"Most people are familiar with the 'sparks' which may be produced under certain conditions by stroking the fur of a cat; and travelers in Canada and other cold, dry countries have witnessed the still more remarkable phenomenon of the human body being turned into a conductor of electricity, and the possibility of lighting the gas by merely placing one's finger—given the necessary conditions of electrical excitement—near the gas jet, without any other agency. Mr.

A. W. Mitchinson, the African traveler, who is engaged in writing a narrative of his exploring expeditions in West Central Africa, gives some still more startling facts. He states that one evening, when striking an African native, in a moment of anger, with a cowhide whip, he was astonished to see sparks produced, and still more surprised to find the natives themselves were quite accustomed to the phenomenon. He subsequently found that a very light touch, repeated several times, under certain conditions of bodily excitement, and in certain states of the atmosphere, would produce a succession of sparks from the bodies of native men as well as native cattle. A lazy nigger, it seems, yielded none of these signs of electricity—a rather unfortunate circumstance for his more active brethren, who may possibly come in for a share of undeserved flogging from the hands of future travelers in search of electrical phenomena among the human race. We are not aware that these facts have been recorded by other travelers, but they certainly deserve thorough sifting by competent observers."

QUERIES AND REPLIES.

Dr. W. P. L. requests information with regard to the cause, effect and treatment of excess of phosphates in the urine.

Dr. H. W. M., of Iowa, asks some one to give him the formula for "Tully's powders."

MARRIAGES.

DARMON-SMITH.—In Milford, N. J., on the 2d of June, by Rev. Isaac M. Patterson, Charles H. Darmon, M.D., and Ella, daughter of William L. Smith, Esq., all of Milford.

LOWRY-VINCENT.—In Watsonstown, Pa., June 2d, by Rev. A. M. Lowry, James L. Lowry, M.D., of Armstrong, Ill., and Rebecca, daughter of Isaac Vincent, Esq.

MERRILL-HALL.—On Thursday, May 27th, 1880, in Newark, N. J., at the residence of the bride's aunt, by the Rev. Joseph T. Duryea, D.D., of Boston, assisted by the Rev. T. Finley, D.D., of Newark, Dr. F. G. Merrill and Caroline Searing, daughter of Thomas J. Hall, both of New York.

MILLER-WARD.—On Thursday evening, June 2d, at St. Matthew's Church, Jersey City, by the Rev. Joseph I. Elsegood, D.D., assisted by the Rev. G. H. Sterling, Dr. Francis Hendria Miller and Lillian Herbert, daughter of John F. Ward.

RICHARDS-ORTON.—On Wednesday, June 9th, 1880, at St. Barnabas Church, Irvington, N. Y., by the Rev. Wm. H. Benjam., Dr. William G. Richards and Alice Lee, daughter of the late Wm. Orton.

SNOW-BIRD.—On May 28th, 1880, at Almost, Mich., by Rev. I. N. Elwood, S. A. Snow, M.D., and Miss Huldah E. Bird, daughter of Rev. S. Bird, of the Detroit Conference.

WOLFORD-ALTEMUS.—On June 3d, 1880, in this city, at Arch Street M. E. Church, by Rev. Dr. Tiffany, W. Scott Wolford, M.D., and Miss Ella M. Altemus, both of this city.

DEATHS.

ARMSTRONG.—Dr. H. Armstrong, a prominent physician and army surgeon, died at Auburn, N. Y., June 8th.

STANCHFIELD.—Bart Stanchfield, son of Dr. J. K. Stanchfield, a prominent physician, died on the 9th inst., of malarial fever, contracted at Princeton College.

